

CLAIMS:

1. A planar carbon segment commutator comprising: a commutator base of insulating material, the base having a rotational axis, front and rear surfaces, extending, at least in part, transversely to the rotational axis, and a plurality of first apertures extending through  
5 the base; a plurality of commutator terminals each of which comprises a terminal portion and a contact portion, the contact portion of each terminal extending through a respective first aperture in the base and being bent to lie against or in close proximity to the front surface of the base and the terminal portion of each terminal having a cutting edge for cutting insulation on a connector portion of a winding and a slot which in use straddles  
10 and grips said connector portion; and a plurality of carbon segments formed on the front surface of the base and over the contact portions, respectively, of the terminals.
2. The commutator of claim 1, further comprising a housing having a plurality of housing recesses for receiving the terminal portions, respectively, of the terminals.
3. The commutator of claim 2, wherein each housing recess has associated therewith  
15 means for positioning connector portions of the winding relative to each recess; the base, the terminals and the housing being such that with a single translational movement of the base relative to the housing, the terminal portions enter the housing recesses, the cutting edges strip insulation from connector portions of the winding and the slots establish and maintain electrical contact with connector portions of the winding by insulation  
20 displacement.
4. The commutator of claim 2, wherein the base has a cylindrical skirt extending rearwardly of its rear surface for receiving the housing.
5. The commutator of claim 1, wherein the front surface of the base has therein a plurality of recesses and each contact portion overlies a respective recess and has at least  
25 one aperture through which material forming a respective commutator segment extends into the recess to assist in anchoring the segment to the terminal.
6. The commutator of claim 5, wherein the base has a plurality of second apertures communicating with respective recesses and through which material forming the commutator segments extends to assist in anchoring the segments to the base.
- 30 7. The commutator of claim 5, wherein the recesses are elongate and extend radially of the base.
8. The commutator of claim 5, wherein the first apertures are radially aligned with and outwardly disposed of the recesses, respectively.

9. The commutator of claim 5, wherein the base has a plurality of third apertures spaced from the recesses and through which material forming the commutator segments extends to assist in anchoring the commutator segments to the base.
10. The commutator of claim 9, wherein there are two third apertures associated with each one of the recesses, one on either side of a respective recess.
11. The commutator of claim 1, wherein the base has a plurality of third apertures through which material forming the commutator segments extends to assist in anchoring the commutator segments to the base.
12. The commutator of claim 1, wherein the base has a central boss for receiving an armature shaft.
13. The commutator of claim 2, wherein the base has a central boss for receiving an armature shaft.
14. The commutator of claim 13, wherein the housing has a central boss coaxial with the boss of the base for receiving the armature shaft.

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